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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT E. HAINES and MARK A. HARPER

Appeal 2009-003763
Application 09/976,625
Technology Center 2600

Decided: September 22, 2009

Before KENNETH W. HAIRSTON, JOHN A. JEFFERY,
and CARL W. WHITEHEAD, JR., *Administrative Patent Judges*.

HAIRSTON, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants seek our review under 35 U.S.C. § 134(a) of the Examiner's final rejection of claims 43 to 66.[1] We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM-IN-PART.

Appellants' disclosed and claimed invention relates to a system and method for managing peripheral device (e.g., a printer) consumables (e.g., paper or toner) (Abs.; Spec. 1). The method includes receiving identification information and status information for a plurality of peripheral devices on a common network (claims 43, 53, 54), and may also include receiving threshold information corresponding to operations of each of the peripheral devices (claims 43, 55). The method may also include defining a plurality of different groups of peripheral devices, combining statuses of the devices in one of the groups to form combined status data, and then comparing the combined status data to a threshold to determine an action to be taken (i.e., replenishment of the consumable, initiating a shipment, etc.) (claims 47, 48, 53, 61, and 62).

Claim 53 is representative of the claimed invention, and reads as follows:

53. A peripheral device consumable management method comprising:

first receiving identification information regarding a plurality of peripheral devices individually configured to consume a consumable;

defining a plurality of different groups individually comprising different ones of the peripheral devices;

receiving statuses from the peripheral devices indicating

[1] Claims 1 to 42 have been canceled.

replenishment of the consumable is desired for respective ones of the peripheral devices;

for an individual one of the groups, combining the statuses of the respective peripheral devices of the group providing combined status data;

comparing the combined status data with respect to a threshold; and

initiating an action with respect to replenishment of the consumable for the peripheral devices of the group responsive to the comparing indicating the combined status data triggering the threshold.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Sampath	US 6,892,317 B1	May 10, 2005 (filed Dec. 16, 1999)

The Examiner rejected claims 43 to 66 under 35 U.S.C. § 102(e) based upon the teachings of Sampath.

In establishing a prima facie case of anticipation under § 102(e) the Examiner relies upon Sampath as teaching the steps of receiving identification, status, and threshold information relating to a plurality of peripheral devices such as printers (Ans. 3-4, 6-8). The Examiner determines (Ans. 3, 12) that Sampath inherently receives "identification" information, because Sampath's diagnostic server 100 must know the identity of devices it is to monitor. The Examiner also determines (Ans. 7) that Sampath defines a "plurality of different groups," each having plural peripheral devices, because Sampath monitors printers and other electronic devices.

FINDINGS OF FACT (FF)

1. As indicated *supra*, Appellants describe and claim a system and method for managing peripheral devices (e.g., printers, photo copiers, facsimile machines, hard copy output engines, etc.) and their consumables (e.g., paper or toner, toner supply cartridges, etc.) (Abs.; Spec. 1). The method and system use information regarding the identification and status of consumable supplies, and can provide "economies of scale by pooling orders to service multiple hard copy output engines, especially those using at least some of the same consumable commodities" so as to avoid over-stocking or under-stocking of commodities (Spec. 2).
2. Sampath describes a method and system 10 for diagnosing and monitoring one or more electronic systems 200 on a network 25 including pooling failure and diagnostic data using data pooling circuit 155 (Fig. 1; Abstract; col. 1, l. 33 to col. 3, l. 16; col. 3, l. 44 to col. 4, l. 10). Sampath describes notifying remote users of device failures and allows those users to view the diagnostic information needed to take action (Abstract). Sampath also describes managing and diagnosing the repair and resupply of printer consumables for peripheral devices 200 using status information, control data, process data, diagnostic data, and status information such as "highly specialized data" or "itemization" data (col. 4, ll. 55-66). The system 10 of Sampath "is capable of pooling diagnostic data received from the plurality of electronic systems to provide a richer database from which failure prediction analysis can be generated" (col. 3, ll. 52-55).

Sampath discloses, like Appellants (*see* FF 1 *supra*), that by pooling the data, "a reduction in service time and parts acquisition time is achieved" (col. 3, ll. 55-57) and customer downtime is minimized (*see* col. 3, ll. 57-61).

3. Sampath describes a prediction/diagnostic circuit 150 that uses a "threshold analysis" to compare status information regarding the electronic devices (such as printers) with a threshold in order to predict, diagnose, and store information as well as trigger repair/resupply of the devices (*see* Fig. 1; col. 6, ll. 17-65).
4. Sampath also describes a diagnostic server 100 that communicates information through a firewall (col. 2, l. 30) over interface 130 to obtain "knowledge" (col. 2, ll. 6-13) about the consumable supply status of the printers or devices 200 using (i) controller 120 (i.e., processing circuitry), and (ii) "command and control signals" (col. 7, l. 2-4) in order to take appropriate repair/resupply action (*see* col. 5, l. 51 to col. 6, l. 65). The prediction/diagnostic circuit 150 and diagnostic server 100 receive status information from the monitored device 200 (col. 5, ll. 51-62), and if the devices are printers, the status data can be (i) related to a printer error, (ii) other information that is critical to the non-operational status of the printers, or (iii) any data that indicates the printers have failed and any additional related device status information (col. 6, ll. 7-13). Sampath discloses that devices may be diagnosed in response to "querying data" sent over the network to the devices (col. 1, ll. 23-28).
5. Sampath discloses that actions taken in response to the diagnosis can include checking the threshold, requesting service, replacing

consumables as needed, or requesting parts for replacement (*see* Table 1 at col. 7, ll. 9-35). Diagnostic server 100 forwards the action request via network 25's link 50 and can schedule repair or even autonomously perform necessary repairs (col. 7, ll. 36-45; col. 8, ll. 13-16).

6. Sampath describes using identification information for making repairs, such as "identification or instructions," "machine identification," and "repair identification" (col. 10, ll. 49-52).
7. Sampath describes pooling or combining status data of plural devices or printers 200 to form a collection of data using data pooling circuit 155, prediction/diagnostics circuit 150, and diagnostic server 100 to achieve a comprehensive failure prediction/diagnosing system (*see* Abstract; Fig. 1; col. 6, ll. 3-65). A threshold analysis is performed to determine an action to be taken based on a comparison of the status information to a threshold value (col. 6, ll. 29-55; *see* FF 5 *supra* for the actions to be taken).
8. Sampath's diagnostic server 100 sends command and control signals to the devices 200, such as recalibration data and automatic repair sequence control signals (col. 7, ll. 2-7). Based on the analyses of the devices 200, and in response to the received status information, a repair planning circuit 165 determines the appropriate action to take and then routing circuit 160 cooperates with controller 120 and interface 130 to route the action request (col. 6, ll. 58-65).

ISSUES

Claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66

With regard to the rejection of independent claims 43 and 54, Appellants argue, *inter alia*, that Sampath fails to teach (i) receiving *identification information* for a plurality of peripheral devices, as set forth in claims 43 and 53 (App. Br. 4-7; Reply Br. 2-4, 6), and (ii) a communications interface and processing circuitry configured to receive and access the *identification information*, respectively (App. Br. 9; Reply Br. 10-11). Appellants' main contention in this regard is that the existence identification information is not inherent, and does not necessarily flow, from the teachings of Sampath.

With regard to the rejection of claims 43 and 63, Appellants argue (App. Br. 5-6, 12; Reply Br. 5-6, 14-15) that Sampath fails to teach formulating *configuration data* according to, or by setting, thresholds. With regard to the rejection of claim 64 Appellants argue (App. Br. 13; Reply Br. 16) that Sampath fails to teach communicating and reviewing the configuration data.

With regard to the rejection of claims 54, 65, and 66, Appellants argue (App. Br. 9, 13-14; Reply Br. 9-10, 17-19) that Sampath fails to *initiate discovery* of the plurality of peripheral devices.

With regard to the rejection of claims 45 and 57, Appellants argue (App. Br. 10-11; Reply Br. 11-12) that Sampath fails to teach a *firewall* associated with a common network that outputs instructions causing an entity inside the firewall to discover the presence of the peripheral devices.

Based on Appellants' arguments, the following issue is presented: Have Appellants shown that the Examiner erred in determining that Sampath

inherently or expressly teaches all of the limitations of claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66, including the identification information, configuration data, initiation of discovery of peripheral devices, and firewall, as set forth in claims 43, 45, 54, 57, 63, 65, and 66?

Claims 48, 53, and 62

With regard to the rejection of dependent claims 48 and 62, and independent claim 53, Appellants argue, *inter alia* (App. Br. 7, 11-12; Reply Br. 6-7, 14) that Sampath fails to teach defining a plurality of different groups of peripheral devices and combining the statuses of the devices in the group to obtain a combined status data for comparison with a threshold, as set forth in claims 48, 53, and 62. Appellants contend that Sampath does not group printers or describe sets of printers, and that Sampath's pooling of information fails to teach defining different groups of printers for purposes of combining status data and comparison with a threshold as recited in claims 48, 53, and 62.

Based on Appellants' arguments, the following issue is presented: Have Appellants shown that the Examiner erred in determining that Sampath teaches "defining a plurality of different groups" of peripheral devices, as set forth in each of claims 48, 53, and 62?

PRINCIPLES OF LAW

Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as they would be interpreted by one

of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

Anticipation is established when a single prior art reference discloses, expressly or under the principles of inherency, each and every limitation of the claimed invention. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1347 (Fed. Cir. 1999); *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994). To establish inherency, the evidence must make clear that the missing descriptive matter is "necessarily present" in the thing described in the reference. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). "'Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claimed limitations, it anticipates.'" *In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002).

Appellant has the burden, when on appeal to the Board, to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006).

ANALYSIS

Claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66

Identification Information

As indicated *supra*, Appellants argue that Sampath fails to teach (i) receiving *identification information* for a plurality of peripheral devices, as set forth in claims 43 and 53 (App. Br. 4-7; Reply Br. 2-4, 6), and (ii) a communications interface and processing circuitry configured to receive and access the *identification information*, respectively (App. Br. 9; Reply Br. 10-11). Appellants' contend that the existence identification information is not inherent, and does not necessarily flow, from the teachings of Sampath.

We disagree with Appellants' argument inasmuch as Sampath teaches all of the limitations of independent claims 43 and 54 of a peripheral device management method and apparatus which receives identification information (e.g. "machine identification" and/or "repair identification") for a plurality of peripheral devices 200 of a common network 25 (FF 6). Sampath also describes managing and diagnosing the repair and resupply of printer consumables for peripheral devices using status information, control data, process data, diagnostic data, and status information such as "highly specialized data" or "itemization" data (*see* FF 2). Because Sampath discloses diagnosing repair and/or consumable resupply for one or more devices, the diagnostic system and method of Sampath *inherently* identifies printers or peripheral devices 200 in the network 25. Appellants have not shown that the Examiner erred in determining that the diagnostic method and apparatus of Sampath inherently receives identification information in order to know the identity of the devices to be monitored and diagnosed.

The rule that anticipation requires that every element of a claim appear in a single reference accommodates situations where the common knowledge of "technologists" is not recorded in a reference, *i.e.*, where technical facts are known to those in the field of invention. *Continental Can Co., USA, Inc. v. Monsanto Co.,* 948 F.2d 1264, 1269 (Fed. Cir. 1991). The common knowledge of the technologist would include the technical fact that diagnostic and peripheral management methods and systems operate using identification information to identify a peripheral device to be monitored, diagnosed, or managed.

The peripheral device diagnostic method and apparatus 10 (including diagnostic server 100) of Sampath, which diagnoses and monitors

consumable status of printers 200 on a common network 25 (*see* FF 2), necessarily functions in accordance with, or includes, the claimed limitation of receiving identification information in order to determine the location of the device, since Sampath must know the location of a device in order to service, repair, or resupply that device (*see* FF 5, 6). *See Cruciferous Sprout Litig.*, 301 F.3d at 1349. That such operation of the method and system 10 necessarily operates in this manner is amplified by the fact that Sampath describes notifying remote users of device failures and allows those users to view the diagnostic information needed to take action (i.e., repair or resupply) (*see* FF 2). Because a repair could not take place without knowing which device on the network needed the repair, and a remote user is subsequently notified which printer has a problem, it follows that Sampath utilizes identifiers for each of the plural peripheral devices 200 on the network 25. Appellants have not convincingly shown otherwise.

For the foregoing reasons, Appellants' arguments that Sampath fails to teach the identification information limitations of claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66 (App. Br. 4-7, 9; Reply Br. 2-4, 6, 10-11), are unpersuasive.

Configuration Data

With regard to the rejection of claims 43 and 63, Appellants' contentions (App. Br. 5-6, 12-13; Reply Br. 5-6, 14-16) that Sampath fails to teach formulating and communicating *configuration data* according to thresholds, or by setting thresholds, are unconvincing in light of our findings concerning Sampath's diagnostic server 100 and repair planning circuit 165 which can perform recalibration of the printers/devices 200 (*see* FF 8). Recalibration of printers would necessarily include formulating or setting

new threshold values needed for diagnosis and prediction analysis as well as calibration. Broadly interpreted, the term "configuration data" encompasses the action request forwarded by Sampath's diagnostic server 100 to printers/devices 200 over link 50 (*see* FF 5). *Am. Acad. of Sci. Tech Ctr.*, 367 F.3d at 1364.

Initiation of Discovery

With regard to the rejection of claims 54, 65, and 66, Appellants' contentions (App. Br. 9, 13-14; Reply Br. 9-10, 17-19) that Sampath fails to *initiate discovery* of the plurality of peripheral devices are unconvincing in light of our findings concerning Sampath's disclosure of a diagnostic server 100 that can send "querying data" to obtain "knowledge" about the status of electronic devices or printers 200 that are on the common network 25 (*see* FF 4).

Firewall

With regard to the rejection of claims 45 and 57, Appellants' contentions (App. Br. 10-11; Reply Br. 11-12) that Sampath fails to teach a *firewall* associated with a common network that outputs instructions causing an entity inside the firewall to discover the presence of the peripheral devices are unconvincing in light of our findings concerning Sampath's disclosure of a firewall (FF 4). Sampath's firewall is associated with a common network 25 which communicates with remote observers (*see* FF 2) such as "the appropriate service, repair, and/or parts/consumables supplier" (*see* FF 4; column 6, ll. 63 and 64).

Combined Status Data

With regard to the rejection of claims 47 and 61, Appellants' contentions (App. Br. 11; Reply Br. 12-13) that Sampath fails to teach

combined status data which is compared with an order threshold, is unconvincing in light of our findings concerning Sampath's pooling of status data, diagnostic data, and failure data using data pooling circuit 155 (FF 2). Sampath's data pooling circuit 155 forms a collection of data for comparison by prediction/diagnostics circuit 150 with a threshold, and then the prediction/diagnostics circuit 150 takes an action consisting of placing an order for more supplies (FF 5, 7). Although Sampath teaches pooling or grouping status data for plural printers/devices 200, Sampath is silent as to arranging or defining different groups of printers/devices for comparison and/or diagnosis (*see* discussion of "defining a plurality of different groups" of peripheral devices with respect to claims 48, 53, and 62, *infra*).

Summary

Appellants have not persuasively rebutted the Examiner's prima facie case of anticipation with respect to claims 43 to 47, 54 to 61, and 63 to 66, as set forth in the Examiner's Answer (*see generally* Ans. 3-21). Appellants have not demonstrated that the Examiner erred in determining that the peripheral device management method and apparatus of Sampath teaches all of the limitations of claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66, including the identification information, configuration data, and initiation of discovery of peripheral devices, firewall, and combined status data as set forth in those claims.

Appellants have not convincingly demonstrated that the Examiner erred in rejecting claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66 under 35 U.S.C. § 102(e) as being anticipated by the teachings of Sampath. *Kahn*, 441 F.3d at 985-86. Accordingly, we will sustain the Examiner's rejection as to these claims.

Claims 48, 53, and 62

Claims 48, 53, and 62 each recite "defining a plurality of different groups" of peripheral devices and combining the statuses of the devices in the group to obtain a combined status data for comparison with a threshold (*see* claims 48, 53, and 62).

As noted *supra*, the Examiner determines that Sampath defines a "plurality of different groups," each having plural peripheral devices, because Sampath monitors printers and other electronic devices. The Examiner relies upon column 3, lines 6-11 of Sampath as describing defining the different groups of devices (Ans. 6, 7). The Examiner also relies upon column 4, lines 55 to 66 of Sampath as describing (i) pooling of failure data, and (ii) the generation, combination, and storing of status information, which the Examiner concludes makes it "clear that Sampath pools failure data which is the same as grouping failure data" (Ans. 19).

We agree with Appellants (*see* App. Br. 7, 11-12) that Sampath's column 3, lines 6 to 11 do not teach the recited limitation of defining a plurality of different groups of peripheral devices. At most this passage from Sampath describes "one or more electronic systems" (col. 3, l. 10), and does not describe defining different groups of peripheral devices. We also agree with Appellants (Reply Br. 14) that Sampath's column 4, lines 55 to 66 do not teach combining status information of a *defined group* of peripheral devices. Sampath's description of the "itemization of one or more components" (col. 4, l. 65) does not expressly or inherently teach the definition of a group or the subsequent combination of the statuses of plural devices of a defined group. Accordingly, Appellants' contention (Reply Br. 6-7, 14) that Sampath does not group printers or describe sets of printers,

and that Sampath's pooling of information fails to teach defining different groups of printers for purposes of combining status data and comparison with a threshold as recited in claims 48, 53, and 62 is convincing.

Appellants have persuasively rebutted the Examiner's prima facie case of anticipation for claims 48, 53, and 62 (*see* Ans. 5-7, 9-10). It follows that anticipation has not been established by the Examiner because Sampath does not disclose each and every limitation of the claimed invention as set forth in claims 48, 53, and 62. *Atlas Powder Co.*, 190 F.3d at 1347; *Paulsen*, 30 F.3d at 1478-79.

CONCLUSIONS OF LAW

(i) Appellants have not shown that the Examiner erred in determining that Sampath inherently or expressly teaches all of the limitations of claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66. Accordingly, we conclude that Appellants have not shown the Examiner erred in rejecting claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66 under 35 U.S.C. § 102(e).

(ii) Appellants have shown that the Examiner erred in determining that Sampath teaches "defining a plurality of different groups" of peripheral devices, as set forth in each of claims 48, 53, and 62. Accordingly, we conclude that Appellants have shown the Examiner erred in rejecting claims 48, 53, and 62 under 35 U.S.C. § 102(e).

ORDER

The decision of the Examiner rejecting claims 43 to 47, 49 to 52, 54 to 61, and 63 to 66 is affirmed, and the decision of the Examiner rejecting

claims 48, 53, and 62 is reversed. Accordingly, the decision of the Examiner rejecting claims 43 to 66 is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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